

Waimanalo Gulch Sanitary Landfill Sediment Samples
Collected 1/28/2011

Method	Analyte	DOD Table I-2^a	Unit	DP	NPE	NPW	SPE	SPW
SW846 6010B	Antimony	82	mg/Kg	3	0.49 J	<1.5	<1.5	0.53 J
Arsenic		1.9	mg/Kg	4.4	<1.9	<1.9	<1.9	<1.9
Barium		4,287	mg/Kg	140	85	83	87	74
Beryllium		150	mg/Kg	0.53	0.52	0.65	1.1	0.72
Boron		40,810	mg/Kg	11	4.3 J	4.1 J	6.6 J	4 J
Cadmium		162	mg/Kg	1.2	0.15 J	0.12 J	0.18 J	0.13 J
Chromium		NA	mg/Kg	100	58	51	54	48
Cobalt		176	mg/Kg	35	33	31	32	28
Copper		8,176	mg/Kg	97	40	36	42	36
Lead		800	mg/Kg	69	4	4	5.7	3.9
Molybdenum		1,022	mg/Kg	0.45 J	<2	<2	<2	<2
Nickel		4,088	mg/Kg	120	87	79	84	75
Selenium		1,022	mg/Kg	<1.3	<1.3	<1.3	<2.3	<1.3
Silver		1,022	mg/Kg	0.58 J	<1	<1	<1	<1
Thallium		13	mg/Kg	<1 *	<0.83 *	<0.87 *	<1.7 *	<0.89 *
Vanadium		1,431	mg/Kg	120	100	91	82	82
Zinc		61,320	mg/Kg	260 B	79 B	73 B	84 B	70 B
TCLP	Chromium		mg/L	0.0061 J	-	-	-	-
SW846 7471A	Mercury	61.32	mg/Kg	0.26	0.047	0.044	0.051	0.037
SW846 8015B	Diesel Range Organics	500	mg/Kg	36	6	5.2	6.3	5.6
	Gasoline Range Organics	4,037	mg/Kg	1.7 B	1.5 B	0.85 J B	1.3 B	0.72 J B
	Motor Oil Range Organics	30,658	mg/Kg	230	34	25	33	20

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SW846 8081A	4,4'-DDD	7,180	µg/kg	20	<1.7	<1.7	<1.7	<1.7
	4,4'-DDE	5,070	µg/kg	28	<1.7	<1.7	<1.7	<1.7
	4,4'-DDT	7,030	µg/kg	23	<1.7	<1.7	<1.7	<1.7
Aldrin	100	µg/kg	27	<1.7	<1.7	<1.7	<1.7	<1.7
alpha-BHC	NA	µg/kg	27	<1.7	<1.7	<1.7	0.33 J p	
beta-BHC	NA	µg/kg	21	<1.7	<1.7	<1.8	<1.7	
Chlordane (n.o.s.)	NA	µg/kg	200	2.5	3.1	4.1	3.5	
delta-BHC	NA	µg/kg	28 B	<1.7	<1.7	<1.7	<1.7	<1.7
Dieldrin	110	µg/kg	53	0.79 J	0.46 J	1.1 J	0.81 J	
Endosulfan I	NA	µg/kg	20	<1.7	<1.7	<1.7	<1.7	
Endosulfan II	NA	µg/kg	22	<1.7	<1.7	<1.7	<1.7	
Endosulfan sulfate	NA	µg/kg	23	<1.7	<1.7	<1.7	<1.7	
Endosulfan, Total	738,800	µg/kg	66	<1.7	<1.7	<1.7	<1.7	<1.7
Endrin	36,940	µg/kg	20	<1.7	<1.7	<1.7	<1.7	<1.7
Endrin aldehyde	NA	µg/kg	19	<1.7	<1.7	<1.7	<1.7	<1.7
gamma-BHC (Lindane)	2,060	µg/kg	25	<1.7	<1.7	<1.7	<1.7	<1.7
Heptachlor	380	µg/kg	25	<1.7	<1.7	<1.7	<1.7	<1.7
Heptachlor epoxide	190	µg/kg	31	<1.7	<1.7	<1.7	<1.7	<1.7
Methoxychlor	615,660	µg/kg	21	<3.3	<3.3	<3.3	<3.3	<3.3
Technical Chlordane	64,680	µg/kg	490	<25	<25	<25	<25	<25
Toxaphene	1,570	µg/kg	<240	<67	<67	<67	<67	<67

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SW846 8082	PCB-1016	NA	µg/kg	< 33	< 33	< 33	< 33	< 33
	PCB-1221	NA	µg/kg	< 47	< 47	< 47	< 47	< 47
	PCB-1232	NA	µg/kg	< 33	< 33	< 33	< 33	< 33
	PCB-1242	NA	µg/kg	< 33	< 33	< 33	< 33	< 33
	PCB-1248	NA	µg/kg	< 33	< 33	< 33	< 33	< 33
	PCB-1254	NA	µg/kg	< 33	< 33	< 33	< 33	< 33
	PCB-1260	NA	µg/kg	66	< 33	< 33	< 33	< 33
	PCB-1262	NA	µg/kg	< 33	< 33	< 33	< 33	< 33
	PCB-1268	NA	µg/kg	< 33	< 33	< 33	< 33	< 33
	Polychlorinated biphenyls, Total	7,440	µg/kg	66	< 33	< 33	< 33	< 33
SW846 8151A	2,4,5-T	1,231,330	µg/kg	< 20	< 20	< 20	< 20	< 20
	2,4-D	1,536,840	µg/kg	< 80	< 80	< 80	< 80	< 80
	Dalapon	3,693,980	µg/kg	< 40	< 40	< 40	< 40	< 40
	Dinoseb	NA	µg/kg	< 12	< 12	< 12	< 12	< 12
	Silvex (2,4,5-TP)	985,060	µg/kg	< 20	< 20	< 20	< 20	< 20
SW846 8260B	1,1,1,2-Tetrachloroethane	9,920	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,1,1-Trichloroethane	676,420	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,1,2,2-Tetrachloroethane	2,910	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,1,2-Trichloroethane	5,550	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,1-Dichloroethane	17,190	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,1-Dichloroethene	217,860	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,2,3-Trichloropropane	90	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,2-Dibromo-3-Chloropropane	70	µg/kg	< 500	< 500	< 500	< 500	< 500
	1,2-Dibromoethane	170	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,2-Dichlorobenzene	222,000	µg/kg	< 250	< 250	< 250	< 270	< 250
	1,2-Dichloroethane	2,260	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,2-Dichloropropane	4,620	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,3-Dichlorobenzene	595,410	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,3-Dichloropropene, Total	8,330	µg/kg	< 250	< 250	< 250	< 250	< 250
	1,4-Dichlorobenzene	13,190	µg/kg	< 250	< 250	< 250	< 250	< 250

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Method	Analyte	DOH Table 1-2 ^a	Unit	DP	NPE	NPW	SPE	SPW
	2-Butanone (MEK)	27,517,620	µg/kg	<1,000	<1,000	<1,000	<1,000	<1,000
	2-Hexanone	NA	µg/kg	<1,000	<1,000	<1,000	<1,000	<1,000
	4-Methyl-2-pentanone (MIBK)	3,163,880	µg/kg	<1,000	<1,000	<1,000	<1,000	<1,000
Acetone		1112,188,890	µg/kg	720 JB	<1,000	1,100 B	<1,100	<1,000
Acrylonitrile		NA	µg/kg	<5,000	<5,000	<5,000	<5,000	<5,000
Benzene		5,640	µg/kg	<250	<250	<250	<250	<250
Bromodichloromethane		2,880	µg/kg	<250	<250	<250	<250	<250
Bromoform		218,210	µg/kg	<250	<250	<250	<250	<250
Bromomethane		6,970	µg/kg	<500	<500	<500	<500	<500
Carbon disulfide		NA	µg/kg	<250	<250	<250	<250	<250
Carbon tetrachloride		1,290	µg/kg	<250	<250	<250	<250	<250
Chlorobenzene		299,690	µg/kg	<250	<250	<250	<250	<250
Chlorobromomethane		NA	µg/kg	<250	<250	<250	<250	<250
Chloroethane		2,198,390	µg/kg	<500	<500	<500	<500	<500
Chloroform		1,540	µg/kg	<250	<250	<250	<250	<250
Chloromethane		8,610	µg/kg	<500	<500	<500	<500	<500
cis-1,2-Dichloroethene		82,060	µg/kg	<120	<120	<120	<120	<120
cis-1,3-Dichloropropene		NA	µg/kg	<250	<250	<250	<250	<250
Dibromochloromethane		3,710	µg/kg	<250	<250	<250	<250	<250
Dibromomethane		NA	µg/kg	<250	<250	<250	<250	<250
Ethylbenzene		289,890	µg/kg	<250	<250	<250	<250	<250
Iodomethane		NA	µg/kg	<250	<250	<250	<250	<250
Methyl tert-butyl ether		195,210	µg/kg	<250	<250	<250	<250	<250
Methylene Chloride		54,940	µg/kg	<250	<250	<250	<250	<250
Naphthalene		135,760	µg/kg	<500	<500	<500	<500	<500
Styrene		1,000,560	µg/kg	<250	<250	<250	<250	<250
tert-Butyl alcohol		390,940	µg/kg	<10,000	<10,000	<10,000	<10,000	<10,000
Tetrachloroethene		2,720	µg/kg	<250	<250	<250	<250	<250
Toluene		925,290	µg/kg	<250	<250	<250	<250	<250
trans-1,2-Dichloroethene		100,320	µg/kg	<120	<120	<120	<130	<120

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Method	Analyte	DOH Table I-2 ^a	Unit	DP	NPE	NPW	SPE	SPW
	trans-1,3-Dichloropropene	NA	µg/kg	< 250	< 250	< 250	< 250	< 250
	trans-1,4-Dichloro-2-butene	NA	µg/kg	< 250	< 250	< 250	< 250	< 250
	Trichloroethene	14,290	µg/kg	< 250	< 250	< 250	< 250	< 250
	Trichlorofluoromethane	NA	µg/kg	< 500	< 500	< 500	< 500	< 500
	Vinyl acetate	NA	µg/kg	< 500	< 500	< 500	< 500	< 500
	Vinyl chloride	1,680	µg/kg	< 38 *	< 41 *	< 50 *	< 77 *	< 41 *
	Xylenes, Total	444,180	µg/kg	< 250	< 250	< 250	< 250	< 250

Note:

Bold exceed screening criteria (DOH 2009 Table I-1: direct-exposure action levels, unrestricted land use)

a Direct-exposure action levels, commercial/industrial land use

< not detected above the reporting limits

- not analyzed

* not detected above the method detection limits

** Permissible limits for metals as TCLP hazardous waste limit

p The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

µg/kg micrograms per Kilogram

mg/kg milligrams per Kilogram

milligrams per liter

compound was found in the method blank

no screening criterion

j estimated result is less than the reporting limit but greater than or equal to the method detection limit

DP Detention Pond Sample

NPE North Pond of cell E6 on the East side of the pond

NPW North Pond of cell E6 on the West side of the pond

SPE South Pond of cell E6 on the East side of the pond

SPW South Pond of cell E6 on the West side of the pond